

**REMARKS****Status of the claims:**

With the above amendments, claims 1, 2, 5, 6, 8, and 9 have been amended. Claims 1-9 are pending and ready for further action on the merits. No new matter has been added by way of the above amendments. All amendments are made simply for form and are non-narrowing in scope. Reconsideration is respectfully requested in light of the following remarks.

**Written Description Objections**

The Examiner has objected to the written description for the failure to give a brief description of the first column in figure 1. Further, the Examiner has objected to the reversal of the description regarding figures 5 and 6. Finally, the Examiner has objected to a reversal of the descriptions of the figures referred to in figures 5 and 6. Applicants have amended the written description to describe what is in the first lane. Support for the amendment is in the figure itself. Applicants have also amended figures 5 and 6 so that the description corresponds to the correct figure. Withdrawal of the objections is respectfully requested.

**Claim Objections**

Claims 1 and 2 have been objected to under 37 CFR §1.821(d) for a failure to recite "SEQ ID NO:" in the claims. Applicants have amended claims 1 and 2 to recite the SEQ ID Nos:. It is believed that with this amendment that the objection has been obviated. Withdrawal of the objection is respectfully requested.

**Rejections under 35 USC §101**

Claims 1, 2 and 9 have been rejected under 35 USC §101 for a failure to claim statutory subject matter. Claims 1, 2 and 9 have been amended to recite “isolated” in the preamble of these claims. Applicants believe that with these amendments that the rejections have been obviated. Withdrawal of the rejection is warranted and respectfully requested.

**Rejections under 35 USC §112, first paragraph**

Claim 9 is rejected under 35 USC §112, first paragraph as allegedly not being enabled for a failure to satisfy all of the requirements of 37 CFR §§1.801-1.809. The Examiner asserts that there is no proof that a deposit of *Pseudomonas strutzeri* CJ38 satisfying all of the conditions of the Budapest Treaty has been made. At page 2, lines 11-15 of the written description, Applicants have provided a description detailing that the strain *Pseudomonas strutzeri* CJ38 was deposited under the conditions of the Budapest Treaty. Thus, Applicants have satisfied all of the requirements of 37 CFR §§1.801-1.809 including an assurance of the permanence of unrestrained public availability. Withdrawal of the rejection is warranted and respectfully requested.

**Rejections under 35 USC §112, second paragraph**

Claims 5-6 and 8-9 are rejected under 35 USC §112, second paragraph as being indefinite.

Regarding claim 5, the Examiner asserts that “*E. coli*” should be italicized. Applicants have amended claim 5 accordingly. Withdrawal of the rejection is warranted and respectfully requested.

Regarding claim 6, the Examiner asserts that there is insufficient antecedent basis for “transformant”. Applicants have amended claim 6 to recite “transformed *E. coli*”, which has antecedent basis in claim 5. Withdrawal of the rejection is warranted and respectfully requested.

Regarding claim 8, the Examiner asserts that the word “crushing” does not necessarily lyse a cell. Applicants have amended claim 8 to recite “lysing”. Accordingly, Applicants believe that claim 8 is no longer vague or indefinite. Withdrawal of the rejection is respectfully requested.

Regarding claim 9, the Examiner asserts that “novel microorganism” is indefinite. Applicants have amended the phrase “novel microorganism” to “microorganism”. Applicants believe that claim 9 is no longer indefinite. Withdrawal of the rejection is respectfully requested.

### **Rejections under 35 USC §102**

Claims 1, 7, and 9 are rejected under 35 USC §102(b) as being anticipated by either of Nishimoto et al. (Nishimoto et al., *Biosci. Biotech. Biochem.*, (1995), 59(11), pp. 2189-2190) or Ohguchi et al. (Ohguchi et al., *J. Ferm. Bioeng.* (1997), 84(4), pp. 358-360). The Examiner asserts that the enzymes disclosed in these references are the same as the enzymes in the instant invention and the recitation of the amino acid sequence does not provide novelty.

Applicants respectfully point out that the enzyme and the strain taught in the instant invention differ from those taught in Nishimoto et al. and Ohguchi et al.

The present invention relates to a trehalose synthase protein having the amino acid sequence of SEQ ID NO: 2 and *Pseudomonas stutzeri* CJ38 producing the same. Applicants respectfully submit that Nishimoto et al. disclose trehalose synthase proteins and microorganisms belonging to the genus *Pimelobacter*, *Pseudomonas*, or *Thermus* producing the same in *J. Ferm. Bioeng.* 84(4), 358-360 (V).

Regarding enzymes, the enzyme of the present invention has a molecular weight of 76,000 daltons (this data is not shown in the specification), while the enzyme produced from *Pseudomonas* species (*P. putida* H262) by Nishimoto et al. has a molecular weight of 110,000-120,000 daltons (please see column 9, lines 34-35 in US Patent No. 5,538,883), and the enzyme in Ohguchi et al. has a molecular weight of 67,000 daltons (please see the left column on p. 359).

Moreover, the N-terminal amino acid sequences of the enzymes are completely different. These sequences are as follows.

Present Invention sequence: MSIPDNTYIEW (SEQ ID NO:2)

Nishimoto et al. sequence: GKWPRPAAFID (TABLE 13 in US Patent No. 5,538,883)

Ohguchi et al. sequence: TQPDPSYVKWL (left column on page 359).

Therefore the enzyme of the instant invention is different from both Nishimoto et al. and Ohguchi et al.

Regarding the microorganisms, the microorganisms of the present invention (*Pseudomonas stutzeri* CJ38) belongs to a different genus (*Pimelobacter* or *Thermus*) or species (*Pseudomonas putida*) from the ones in Nishimoto et al. Moreover, it is apparent that the microorganisms in the present invention and cited references are different from the fact that the enzymes produced thereby are entirely different as explained above.

In other words, the enzyme and the microorganism are novel over the disclosures of Nishimoto et al. and/or Ohguchi et al. The rejection is inapposite. Withdrawal of the rejection is warranted and respectfully requested.

### **Allowable Subject Matter**

The Examiner has objected to claims 3 and 4 as being dependent on claims that have been rejected. Applicants would like to thank the Examiner for acknowledging that these claims

are allowable if all of the elements of the claims from which they depend are added to these claims.

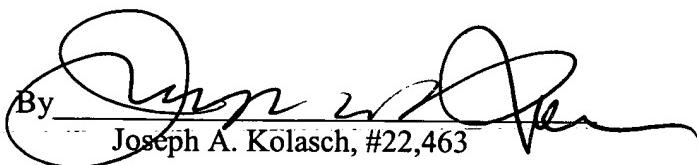
With the above remarks and amendments, it is believed that the claims, as they now stand, define patentable subject matter such that a passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If any questions remain regarding the above matters, please contact Applicant's representative, T. Benjamin Schroeder (Reg. No. 50,990), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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